

In the Claims

Please amend the claims as follows:

1. (Currently amended) An oxidizer package for use in solid fuel propellant system, said oxidizer package comprising a solid oxidizer in the form of discrete pellets of a pre-determined geometric shape, wherein said pellets being are arranged in an array with spaces amongst said pellets and said spaces are filled with a binder. ~~and a holder for maintaining said pellets in said array for receipt of a binder introduced to spaces amongst said array of pellets.~~
2. (Original) An oxidizer package of claim 1 wherein said pellets are pressed from an oxidizer composition.
3. (Original) An oxidizer package of claim 1 wherein said oxidizer composition comprises an oxidizer selected from the group consisting of hydroxylammonium nitrate, ammonium perchlorate, ammonium nitrate, hydroxylammonium perchlorate, nitronium perchlorate, hydrazinium nitroformate and ammonium dinitramide.
4. (Original) An oxidizer package of claim 3 wherein the composition additionally comprises modifiers and/or fuel additives.
5. (Cancelled) An oxidizer package of claim 1 wherein said holder for said array of pellets is a container for holding said pellets in the array until a binder is introduced to spaces amongst said pellets.
6. (Cancelled) An oxidizer package of claim 1 wherein said holder for said array of pellets is a flexible open mesh having adhesive surfaces for sticking to said pellets, said mesh being wrapped about said pellets to hold said pellets in said array until a binder is introduced to spaces amongst said pellets through said open mesh.

7. (Currently amended) A solid fuel propellant system comprising at least one oxidizer package of claim 1 ~~pellets of a solid oxidizer, said pellets having a predetermined geometric shape and being arranged in an array with spaces amongst said pellets, a binder introduced to said spaces amongst said pellets for provide a support matrix for said pellets, said binder being of a selected material to provide complementary burn rates for said pellets and said support binder matrix.~~

8. (Original) A solid fuel propellant system of claim 7, wherein said pellets are pressed from an oxidizer composition.

9. (Original) A solid fuel propellant system of claim 8, wherein said oxidizer composition comprises an oxidizer selected from the group consisting of hydroxylammonium nitrate, ammonium perchlorate, ammonium nitrate, hydroxylammonium perchlorate, nitronium perchlorate, hydrazinium nitroformate and ammonium dinitramide.

10. (Original) A solid fuel propellant system of claim 9, wherein the composition additionally comprises modifiers and/or fuel additives.

11. (Original) A solid fuel propellant system of claim 8, wherein said composition contains ultrafine aluminum.

12. (Currently amended) A solid fuel propellant system of Claim 7, wherein in which a portion of the propellant system comprises at least two oxidizer packages, one oxidizer package being is-separated from another oxidizer package portion by an inhibitor layer.

13. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 12, wherein at least two oxidizer packages in which the portions are in the shape of a right section of a cylinder.

14. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 13 wherein in which said right cylinder is divided into more than one section.

15. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 14 wherein ~~in~~ ~~which~~ said sections are selected from semi-circles, tri-sections and quadrants.

16. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 14 wherein ~~in~~ ~~which~~ said at least two oxidizer packages ~~in which the portions~~ of the propellant have a circular cross-section with parallel planar opposing ends.

17. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 7 wherein ~~in~~ ~~which~~ the pellets are in the form of at least one of spheres, capsules, rods and tubes.

18. (Currently amended) ~~The~~ A solid fuel propellant system of Claim 7 wherein ~~in~~ ~~which~~ the binder is selected from the group consisting of a thermoplastic polymer, a thermoset polymer, waxes or greases, an energetic polymer and a polymerized peroxide.

19. (Currently amended) ~~The~~ A solid fuel propellant system, of Claim 7 wherein ~~in~~ ~~which~~ the binder is a composite propellant or gas generator composition, or a double-base propellant.

20. (Original) A solid fuel propellant system of claim 9, wherein said oxidizer is hydrazinium nitroformate.

21. (Original) A solid fuel propellant system of claim 9, wherein said oxidizer is ammonium dinitramide.

22. (Original) A solid fuel propellant system of claim 7, wherein said propellant system is for a rocket.

23. (Currently amended) A method of making a solid fuel propellant system of claim 7 ~~for solid pellets of oxidizer having a predetermined geometrical shape, comprising:~~

- 12
and
13
Cont.
- i) introducing a the binder amongst said ~~oxidizer~~ pellets arranged in an said array,
 - ii) allowing said binder to set to support said pellets in a binder matrix.

24. (Original) A method of claim 23 comprising the additional step of arranging said pellets in an array of predetermined arrangement.

25. (Original) A method of claim 23 wherein said binder is poured onto said array of pellets and is allowed to flow into spaces amongst said array of pellets.

26. (Original) A method of claim 23 wherein said binder is injected into spaces amongst said array of pellets.

27. (Original) A method of claim 23 wherein said pellets are mixed into said binder to provide thereby a random array of pellets in said binder.

28. (Original) A method of claim 27 wherein a sufficient amount of pellets are mixed with said binder to provide an array spacing between pellets of less than about 50 microns.

29. (New) An oxidizer package of claim 1 wherein the pellets are in the form of at least one of spheres, capsules, rods and tubes.

30. (New) An oxidizer package of claim 1 wherein the binder is selected from the group consisting of a thermoplastic polymer, a thermoset polymer, waxes or greases, an energetic polymer and a polymerized peroxide.

31. (New) An oxidizer package of claim 1 wherein the binder is a composite propellant or gas generator composition, or a double-base propellant.

32. (New) A solid fuel propellant system of claim 7, wherein the binder provides a support binder matrix, the binder being of a selected material to provide complementary burn rates for said pellets and said support binder matrix.

33. (New) An oxidizer package of claim 1 further comprising a holder for maintaining said pellets in said array for receipt of said binder.

34. (New) An oxidizer package of claim 33 wherein said holder for said array of pellets is a container.

35. (New) An oxidizer package of claim 33 wherein said holder for said array of pellets is a flexible open mesh having adhesive surfaces for sticking to said pellets, said mesh being wrapped about said pellets to hold said pellets in said array until a binder is introduced to spaces amongst said pellets through said open mesh.